



WebObjects: State of the Union

Session 700





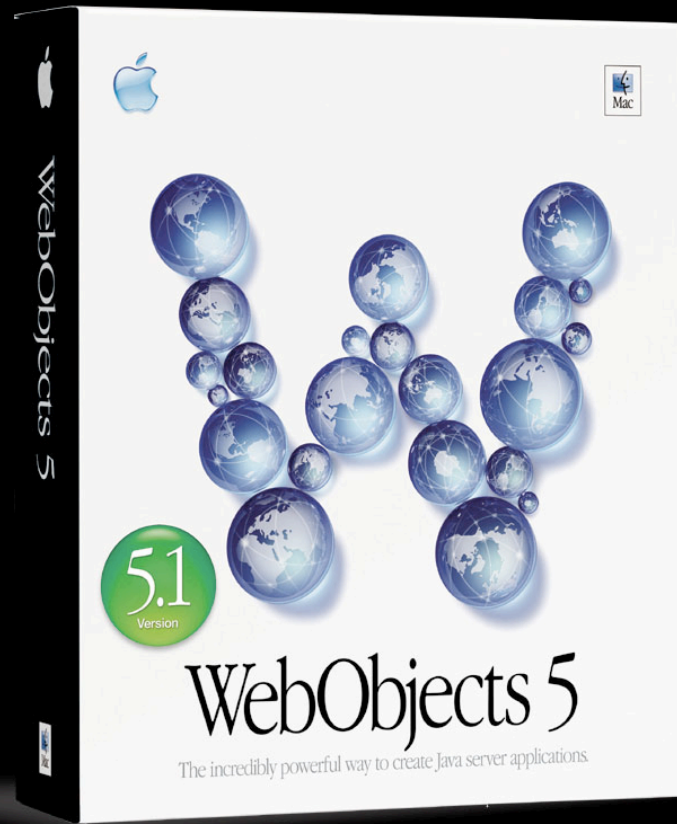
WebObjects: State of the Union

Bob Fraser
Product Manager
WebObjects

What You'll Learn

- Who are the people behind WebObjects
- The inside scoop on WebObjects
- Where is documentation going
- About professional services and training
- Which sessions you will want to attend



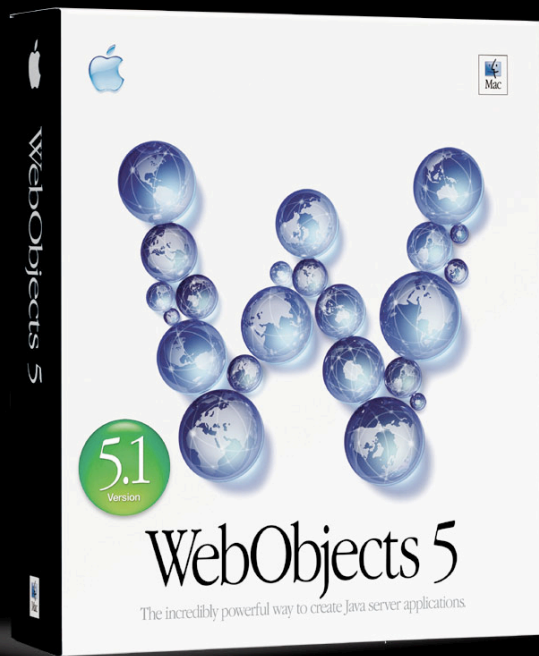


*The incredibly powerful way to create
Java server applications.*



WebObjects 5.1

Everything you need to create three-tier applications



- Integrated development environment
- Database mapping
- Page layout
- Graphical user interface design
- Java deployment to J2EE or J2SE



Advantages

**Deliver web and Java applications
on time and on budget**



- Faster development
- Better results
- Lower development and maintenance costs



Advantages

Accelerates time to market

- Smart tools streamline application design

Allows developers to do more

- Well-designed frameworks incorporate years of best-practices design and do the hard work for you

Reduces overall cost of ownership

- Reusable components make incremental development easy
- Less application-specific code means fewer bugs



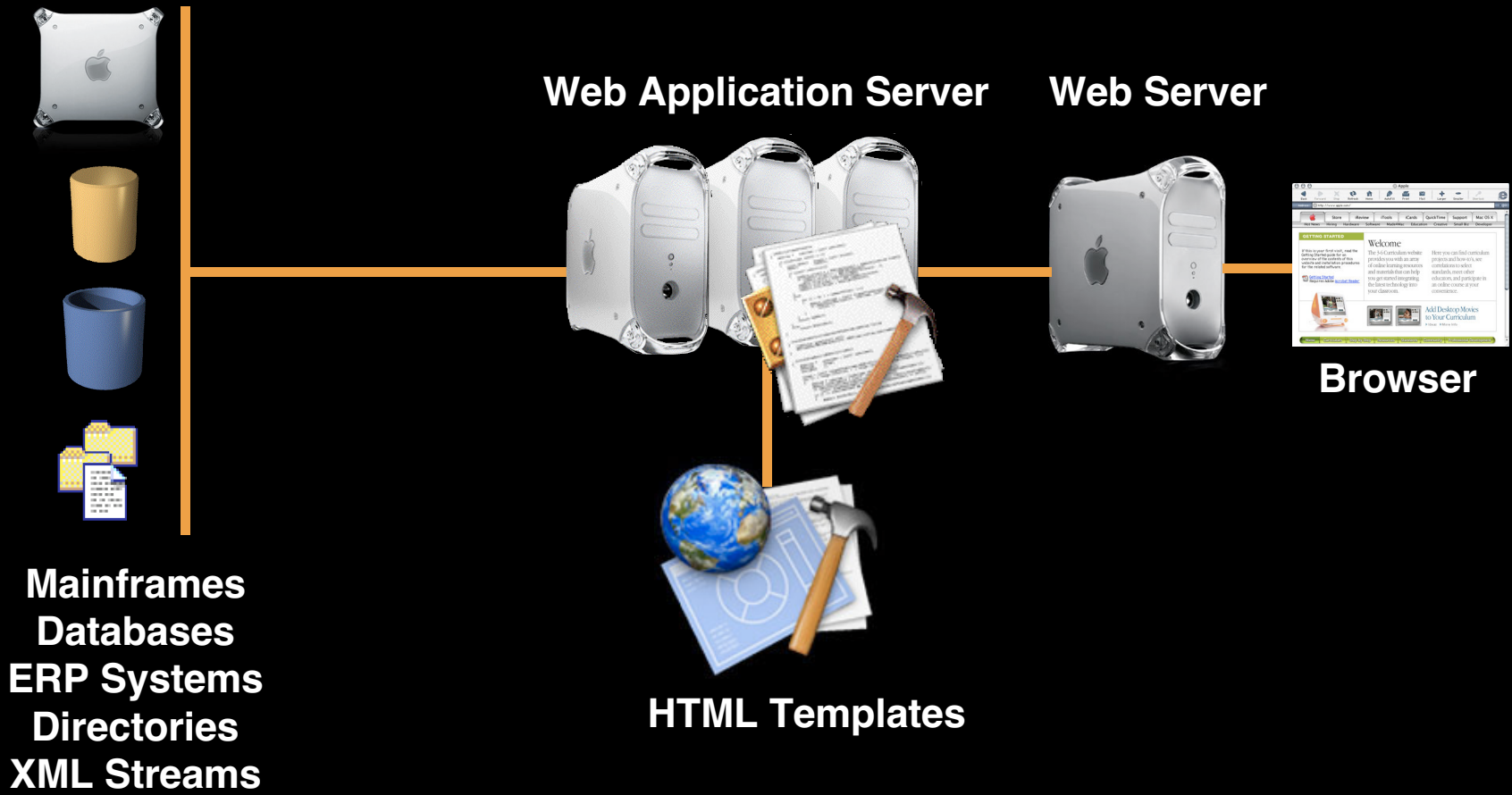
WebObjects Features



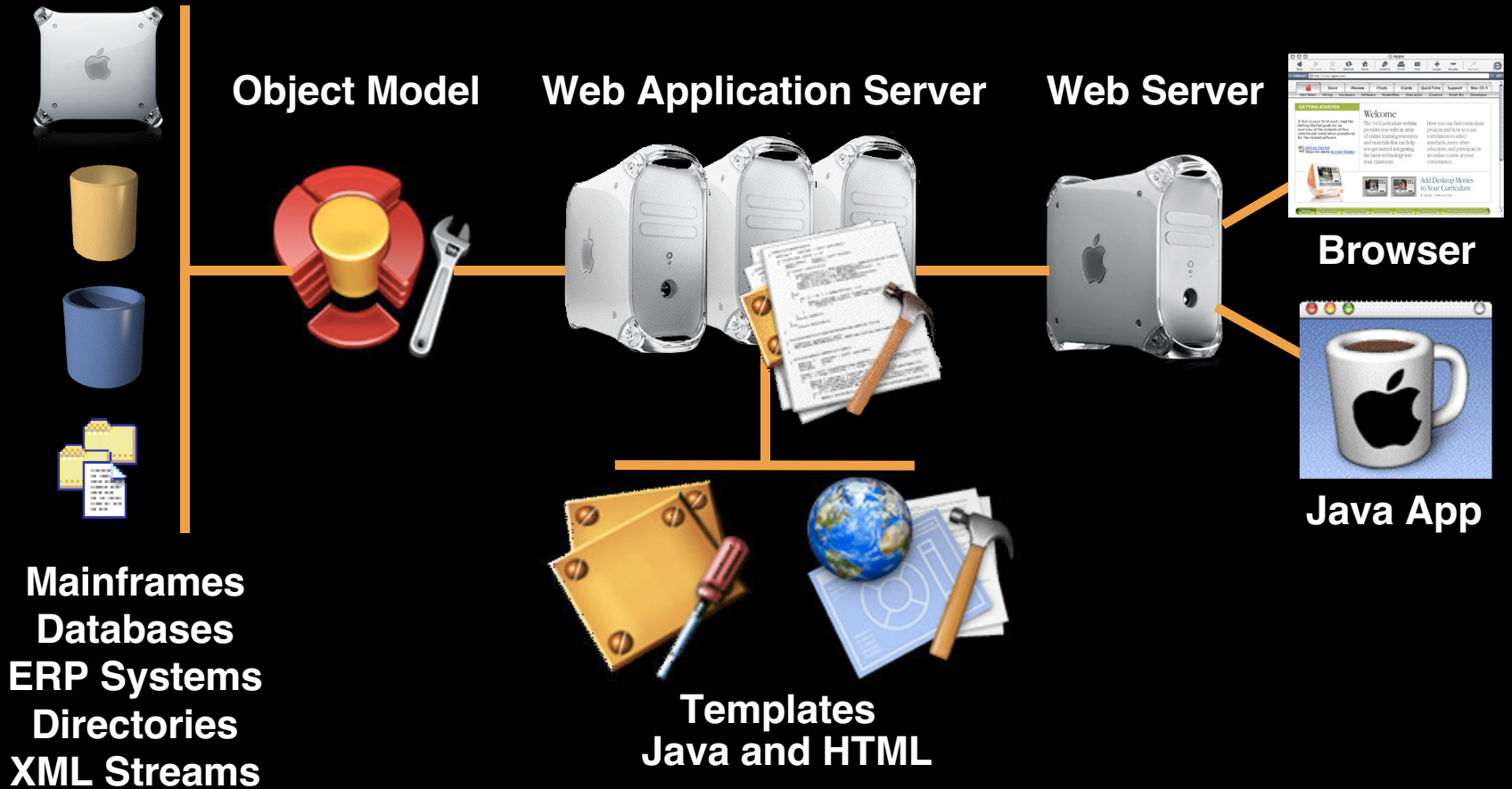
- Automated data access
- Streamlined page generation
- Rich desktop applications
- Integrated tools for rapid application development
- Flexible deployment



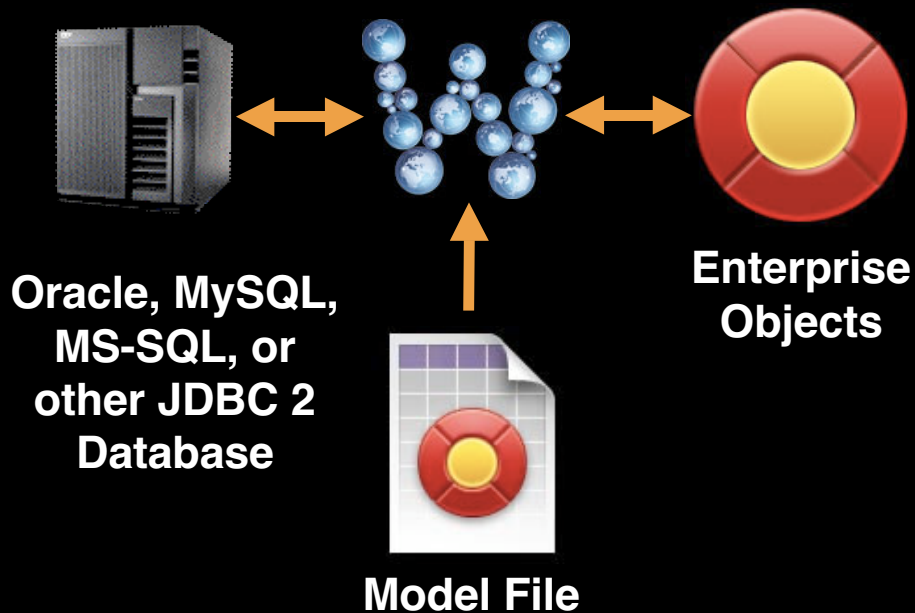
Application Server Architecture



WebObjects Architecture



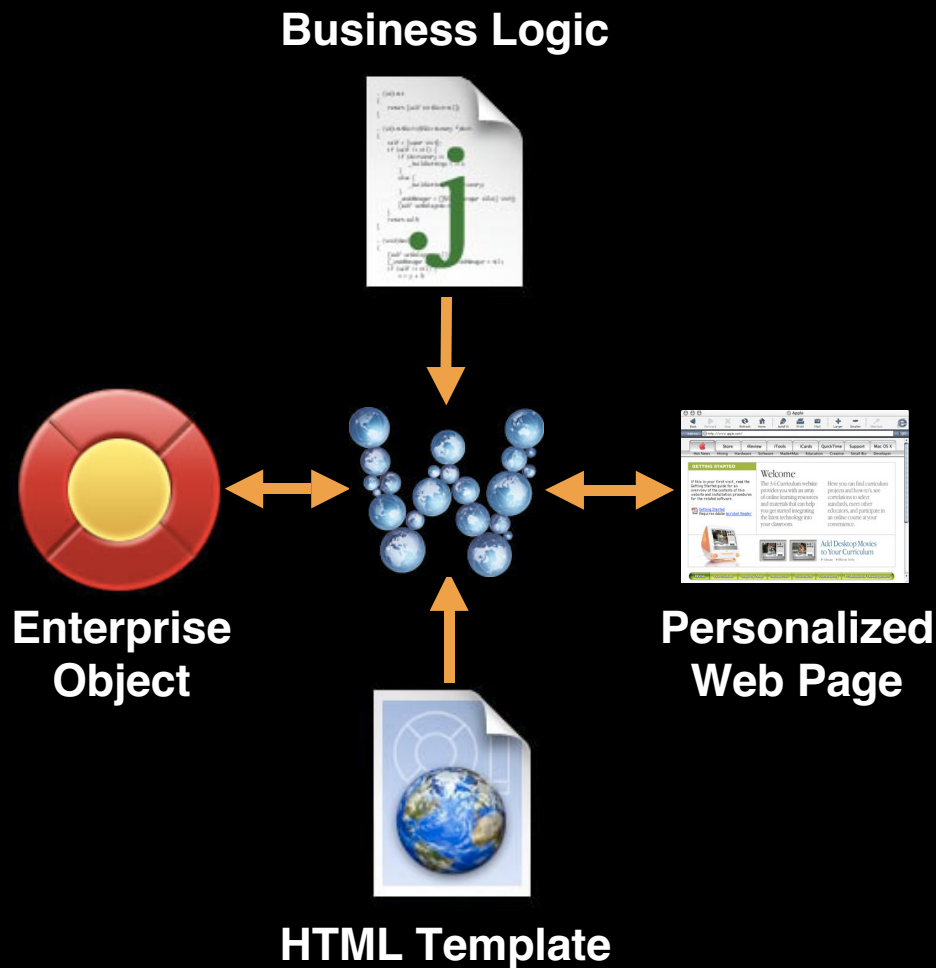
Automated Data Access



- No need to write SQL
- Database independence
 - Easy to switch
 - Use several at once
- Transparent persistence
- JNDI access to LDAP and other directory services



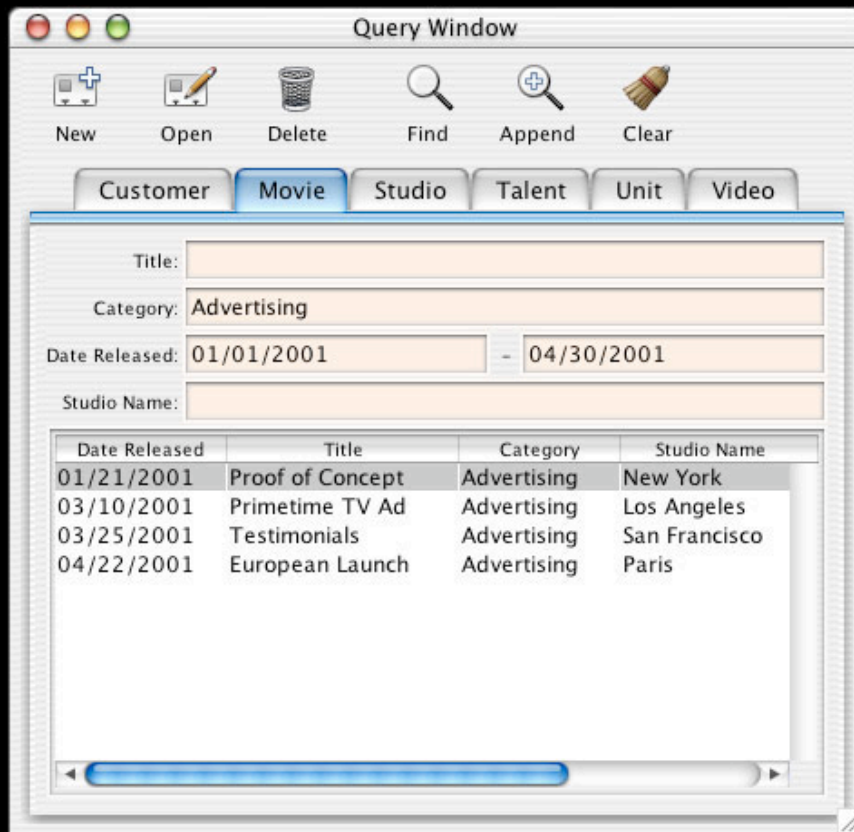
Streamlined Page Generation



- Isolates HTML and logic from the data
- Manages sessions, users, and security
- Generates HTML, XML, or SMIL
- Includes tag library interface for JSPs
- Offers complete multilanguage capability



Build Desktop Applications



- Highly interactive user experience
- Client-side caching for great responsiveness
- Tools for easily creating Swing user interfaces



Integrated Developer Tools



**Project
Builder**



**Enterprise
Object Modeler**



**WebObjects
Builder**



**Interface
Builder**



**Rule
Editor**



Flexible Deployment

Deploy to stand-alone J2SE application server

- Supports Enterprise JavaBeans

Deploy to other J2EE application servers

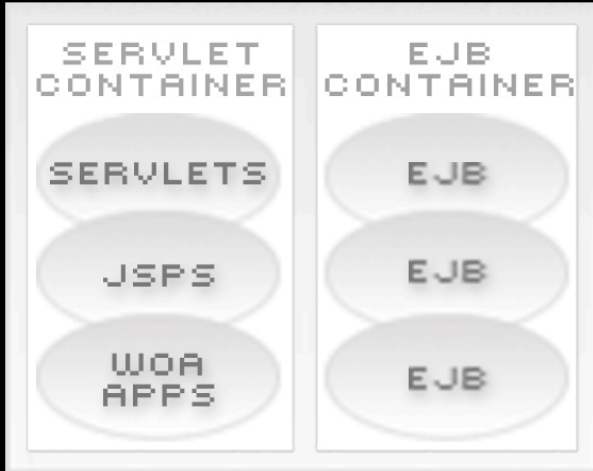
- Uses Servlet 2.2 and JSP 1.1

Scale applications easily and affordably

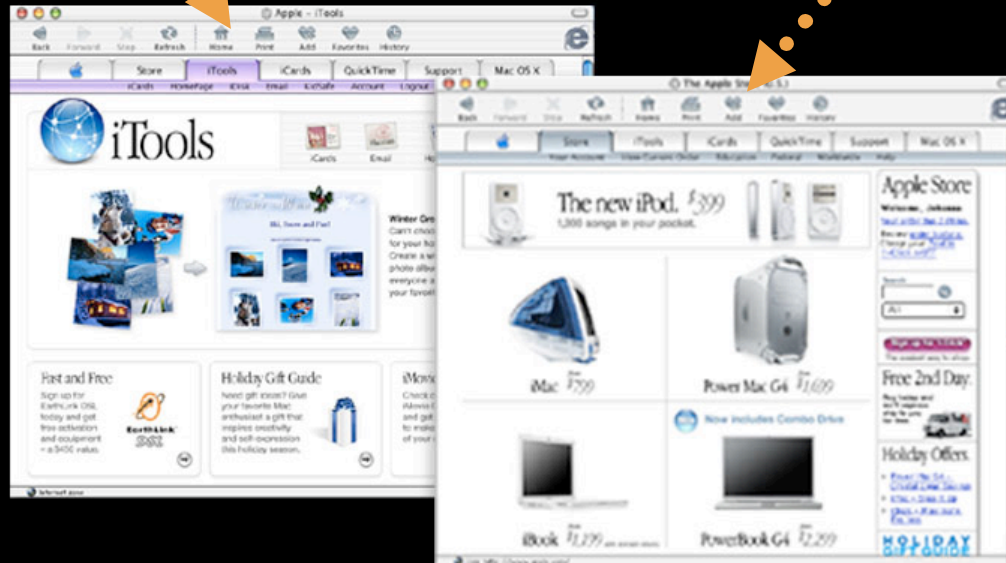
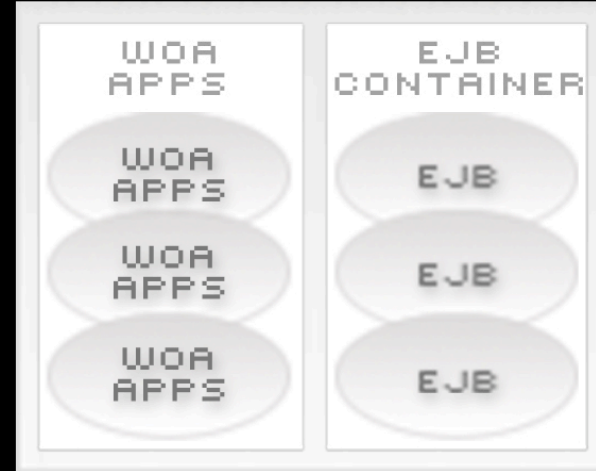
- Flexible, low-cost licensing with no restrictions on number of transactions



J2EE Application Server



WebObjects Java Application Server



Pricing and Availability



- \$699 U.S. SRP
- Includes both development and deployment license
- Available worldwide through the Apple Store and authorized resellers
- For more information:
www.apple.com/webobjects





WebObjects 5.1

What's New in Webobjects 5.1

- JSP Servlet integration
- Enterprise JavaBeans support
- LDAP access via JNDI
- Java Client enhancements
- Additional database support
- New and improved documentation



JSP Servlet Integration

- Run WebObjects applications inside servlet container
- Use container provided services (no Monitor, wotaskd)
- Tag library interface to JSPs
- Qualified on reference J2EE servlet container (Tomcat)



Enterprise JavaBeans Support

- Supports J2EE technologies:
 - Open EJB (EJB 1.1)
 - Tyrex (JTA/JTS)
 - OpenORB (RMI-IIOP)
- Tools assist you in writing new beans
- Import existing beans



LDAP Access Via JNDI

- Use EOModeler to reverse engineer JNDI model
- Insert, update and delete entries
- No schema synchronization



Java Client Enhancements

- WebObjects Desktop Applications book
- Client loader enhancements
- **WOAutoOpenClientApplication**
- JavaClientLauncher



Additional Database Support

- Microsoft SQL Server
- MySQL



WebObjects 5.1 Trial Download

- WebObjects Developer for Mac OS X
 - Available at developer.apple.com
 - Registration required (free)
 - Login → Download Software → WebObjects
 - Expires June 30th, 2002



WWDC Sessions

- Enterprise JavaBeans
 - 708 Enterprise JavaBeans
- JSP/Servlet Deployment
 - 710 JSP and Servlet Integration
- LDAP/JNDI
 - 711 Advanced Data Modeling and Connectivity
- Java Client
 - 706 Direct to Java Client
 - 707 WebObjects Java Client





Announcements

WebObjects 5.1.2 Now Available

- Fixes in three main categories
 - NSTimestamp and related classes, EOF, EOModeler/FileMerge integration
- Overview published in KBase article 75204
www.info.apple.com/kbnum/n75204
 - Release notes for all included changes
- Installation
 - Software Update on Mac OS X
 - Links in overview to download the packages for Windows and Solaris



Enterprise Objects

- Past
- Present
- Future



EOF Past

- + Clean Objective-C integration with Cocoa and IB
- Limited database adaptors
- Tied to older versions of WebObjects



EOF Present

- + Using Java we leverage other work in Java community including JDBC
- + Evaluation redistribution license available today !
- Requires Objective-C programmers do a little Java programming



EOF Future

- Improve runtime efficiency
- Choice of programming language
- Native Objective-C types
- Palette integration for EOF and Interface Builder
- Drive improvements to Objective-C





WebObjects Future Goals

Future Goals

- Legal disclaimer
- Web services
- Direct to Web Services
- XML Serialization
- Java Web Start
- Upgrade installation
- EOBeanBuilder



Web Services

- Glorified remote procedure call
- Hype is giving way to implementation
- Some issues unresolved
 - Security, management, availability
- Early successes involve access to existing data sources and applications
- Web services will be part of many Apple technologies



Web Services

- WebObjects applications as Web services servers
 - Deliver Web Services based on SOAP RPC and SOAP messaging
 - Generation of WSDLs
- WebObjects applications as Web services clients
 - Programmatic access to (third-party) Web Services
 - HTTPS secure connections to the Web Services server
 - Parsing of WSDLs



Direct to Web Services

- Easy generation/customization of Web services
- Automatic WSDL file creation
- Code-free, trivial Web services creation for searching, inserting, updating and deleting EOs
- Web services code generation



XML Serialization

- New serialization classes
- Serialize objects into XML data and de-serialize
- Serialize objects into SOAP/XML content and de-serialize into NSDictionary
 - Can be used for Web services
- Align APIs with Java Binary Serialization
 - Allows easier migration from binary to XML format for archiving
- Transform default archiving XML serialization into a communication format



Java Web Start

- Preferred way of deploying distributed Java applications
- Java Web Start
 - Ships with Mac OS X
 - Download for Windows
- Tightly integrated with WebObjects



Additional Feature Support

- Mac OS X upgrade installation
- EOBeanBuilder



WebObjects Beta

- To be considered for the beta
Appleseed.apple.com/webobjects



WWDC Sessions

- Web Services
 - 705 WebObjects and Web Services
 - 804 Client Web Services Frameworks
- XML Serialization
 - 704 XML in WebObjects
- Java WebStart
 - 707 WebObjects Java Client
- EOBeanBuilder
 - 708 Enterprise Java Beans





WebObjects and Apple

WebObjects and Apple

- Apple markets
- Apple's own use
- Integration and solutions



Apple Markets

- Education
 - Student information systems
 - Portals
- Media Companies
 - Asset management
 - Work flow
- Scientific technical community



Apple's Own Use

- Apple Internal
- Apple Store
- iTools



Apple Store

The screenshot shows the Apple Store website with a navigation bar at the top containing links for Store, iTools, iCards, QuickTime, Soporte, and Mac OS X. Below the navigation bar are links for 'Tu cuenta', 'Ver el pedido actual', 'Mundial', and 'Ayuda'. The main content area is divided into several sections:

- Estilo de vida digital:** A sidebar menu with links for Música, Fotos, and Películas.
- Software:** A list of software categories including Software de Apple, Casa creativa, Educación, Juegos de familia, Juegos de acción, Juegos de estrategia, Estilo de vida, Diseño profesional, Productividad, Utilidades, Vídeo, and Web.
- Accesorios:** A list of accessories including AppleCare, Cables & Hubs, Monitores, Dispositivos de entrada, Música, Otros, Fotos, Portátil, Impresoras, Almacenamiento & Soportes, Vídeo, and Inalámbrico.
- Mejores aplicaciones para Mac OS X:** A section for top applications.

The main product grid features the following items:

- iPod:** € 533 IVA incl. Hasta 2000 canciones en tu bolsillo.
- El nuevo iMac:** desde € 2.029 IVA incl. € 1.749 IVA no incl.
- iBook:** desde € 1.623 IVA incl. € 1.399 IVA no incl.
- PowerBook G4:** Nuevo desde € 3.479 IVA incl. € 2.999 IVA no incl.
- Power Mac G4:** desde € 2.203 IVA incl. € 1.899 IVA no incl.
- Servidores:** desde € 3.827 IVA incl. € 3.299 IVA no incl.
- iMac:** desde € 1.159 IVA incl. € 999 IVA no incl.

On the right side, there is a search bar and several promotional banners:

- Apple Store:** Bienvenido, Robert. Cambiar Perfil, Registrarse para 1-Click.
- Apple Store eNews:** Ponte al día de las noticias más frescas.
- Apple Store:** Ahora precios incluyen el IVA.
- Duerma tranquilo:** Ahorra en un fabuloso monitor de pantalla plana de 17" y APP.
- Fuera cables, fuera preocupaciones:** Compra un PowerBook o un iBook y ahorra en una Estación Base Airport.
- Usa tus contactos:** Compra ahora el iPod de 5 GB y llévate el kit de conexión.
- Cinema Tools para Final Cut Pro.**




iTools

The screenshot shows the iTools website interface. At the top, there is a navigation bar with tabs for Store, iTools (selected), iCards, QuickTime, Support, and Mac OS X. Below this is a secondary navigation bar with links for iCards, HomePage, iDisk, Email, KidSafe, Account, Logout, and Help. The main content area features the iTools logo on the left and a grid of icons for iCards, Email, HomePage, and iDisk on the right. A large promotional banner for iPhoto is centered, titled "Create a Lasting Memory", showing a photo book and text describing its features. Below the banner are three smaller promotional boxes: "Try Webmail Today" (with a Beta badge and Mac.com logo), "Send Us Your Feedback" (with an @ icon), and "Signature with a Smile" (with a photo of a woman). At the bottom, there is a language selection dropdown set to "English", a copyright notice for 2002 Apple Computer, Inc., and a "POWERED BY WebObjects" logo.

Store iTools iCards QuickTime Support Mac OS X

iCards HomePage iDisk Email KidSafe Account Logout Help

 iTools

iCards Email HomePage iDisk

Create a Lasting Memory

Use iPhoto to make a custom hardcover book for your favorite photos, professionally printed on archival quality paper and bound in an elegant linen cover.

Get iPhoto

Try Webmail Today

Beta Mac.com

The beta version of Mac.com Webmail is now available. Be the first to give it a try.

Send Us Your Feedback

@

Email us about your experience with the beta version of Mac.com Webmail.

Signature with a Smile

Add a photo signature to your emails so other Mac OS X Mail users can see your smiling face.

Choose a language below:

English

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POWERED BY WebObjects



Mac.com WebMail

The screenshot displays the Mac.com WebMail interface. At the top, a menu bar includes 'Store', 'iTools', 'iCards', 'QuickTime', 'Support', and 'Mac OS X'. Below this, a secondary menu bar contains 'Get Mail', 'Address Book', 'Preferences', 'Account', 'Logout', and 'Help'. The main interface features a toolbar with icons for 'Get Mail', 'Delete', 'Reply', 'Reply All', 'Forward', and 'Add Sender'. To the right of the toolbar are 'Move To Folder:' and 'Go To Folder:' dropdown menus, and a 'Compose' button. Below the toolbar, the inbox is titled '1 - 1 of 1 in INBOX' and contains a single email from 'Apple Computer Inc.' with the subject 'Welcome to iTools!'. The email details include the date 'Aug 20, 2001 01:08PM' and size '1.6KB'. At the bottom of the interface, there is a language selection dropdown set to 'English', a link to 'Click here to submit feedback.', and a copyright notice: '© Copyright 2002 Apple Computer, Inc. All rights reserved.'



Integration and Solutions

- PowerSchool
- Electronic Board Meeting Solution



PowerSchool

Who and what is PowerSchool

- Division of Apple
- Student Information System
- Targeted at K-12 districts



PowerSchool

Fostering communication
Realtime data

PowerSchool School: Apple Grove High School District: Fremont Unified School District Logout

Allredge, Kimberly Grade: 11

- Grades and Attendance**: Check your student's current grades, total absences and tardies for each class.
- Grade History**: View the history of your student's term grades that were earned during this school year.
- Attendance History**: View the history of your student's total absences and tardies for this school year.
- Email Notifications**: Have your student's progress reports automatically emailed to you.
- Teacher Comments**: Read comments about your student from his or her teachers for this school year.
- School Bulletin**: Discover what is happening at your student's school.
- Class Registration**: Submit course requests for your student for the upcoming school year.
- Meal Balance**: View the remaining balance for your student's lunch or breakfast meals.

PowerSchool

Start Page > Grades and Attendance

- Start Page
- Grades & Attendance**
- Grade History
- Attendance History
- Email Notifications
- Teacher Comments
- School Bulletin
- Class Registration
- Meal Balance

PERIOD	LAST WEEK					THIS WEEK					COURSE	Q1	Q2	S1	ABSENCES		TARDIES	
	M	T	W	T	F	M	T	W	T	F					Pr-01	YTD	Pr-01	YTD
01	T	T	T							T	AP History Adams, Jeffrey H B202A	98	88	98 (A)	8	9	8	9
02		A		A						T	Self Esteem Lam, Chi D401	84	72	84 (B)	2	8	2	8
03											Horticulture Merino, Michelle C PS13	77	89	77 (C)	9	7	9	7
04										T	Physical Education Thompson, Sammie PE801	56	88	56 (D-)	8	5	8	5
05										A	Pre-Calculus Demeter, Christopher M400	94	99	94 (A)	9	9	9	9
06		A		A							Work Study dErrico, Elizabeth WS999	64	52	64 (D)	2	6	2	6
07										A	Art Appreciation Powers, Rachel A101	38	24	38 (F)	4	3	4	3

Legend: **A** = Absent **P** = Present **T** = Tardy **E** = Etc...

Current Simple GPA (X1): **2.6**

Print Page



Other WebObjects Solutions

- Electronic Board Meeting Solution
 - Online agenda and meeting materials
 - Save time and money by going paperless



Integration and Solutions

- Application Integration
 - WebObjects, Java, Cocoa, AppleScript Studio
- Mac OS X Server
 - WebObjects Deployment bundled with Mac OS X Server
 - Open Directory



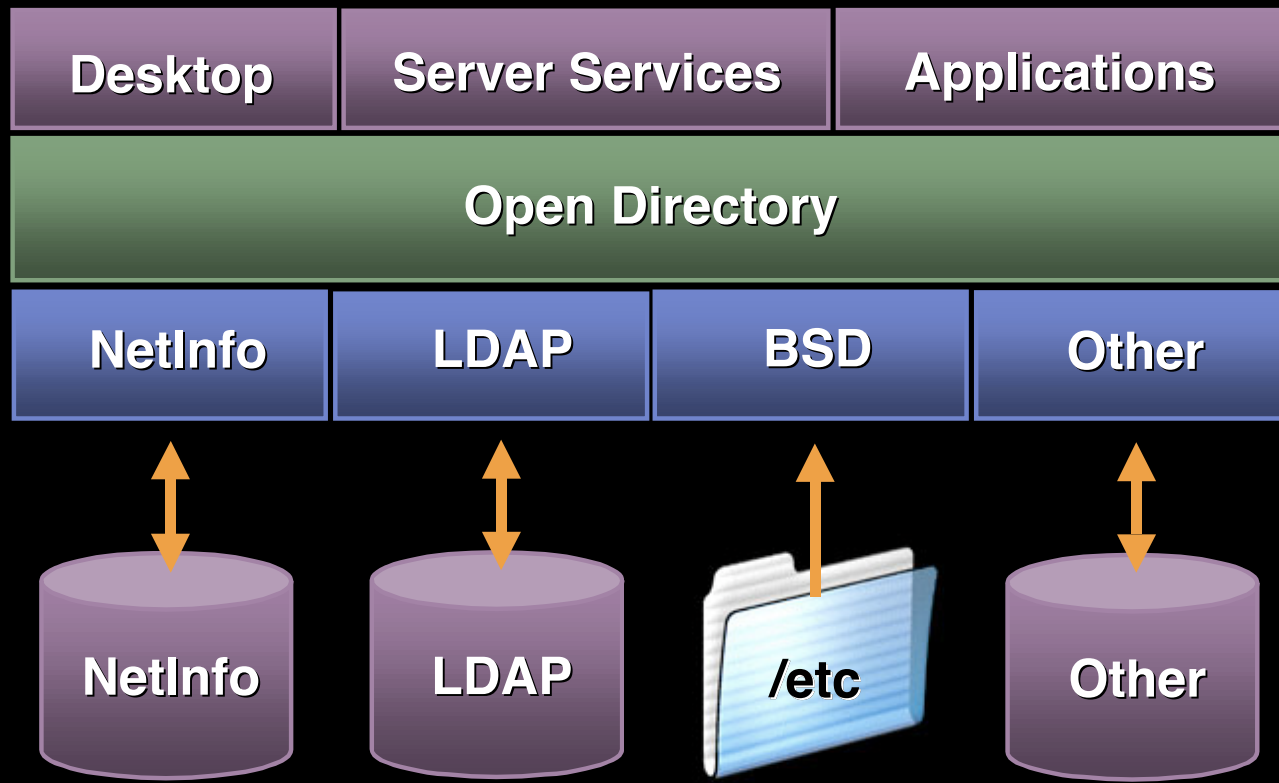
What Is Open Directory?

- Open Directory is Apple's standards-based directory services architecture
- Uses industry standards including LDAP, SASL, and authentication . . [Auth Methods]
- Open Directory Access
- Open Directory Server
- Open Directory Tools

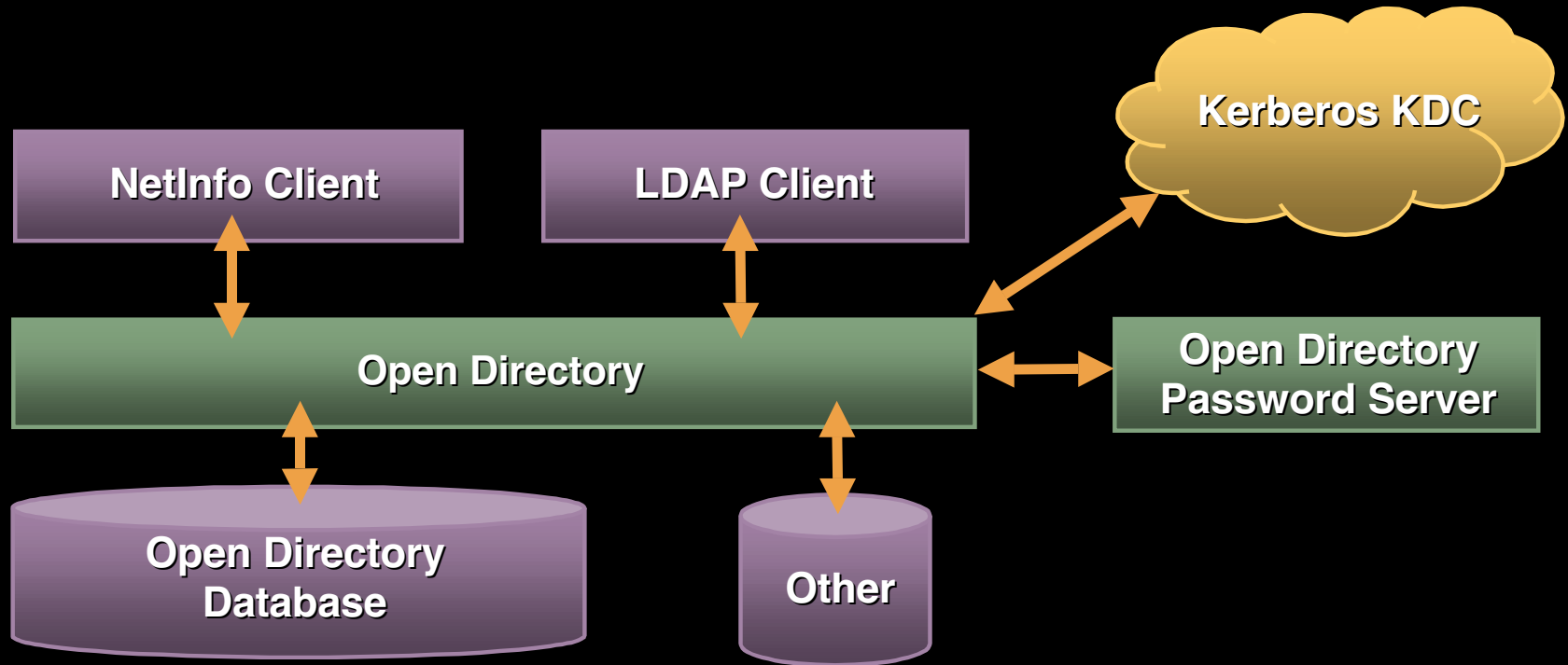


Open Directory Access

Standards-based directory services architecture

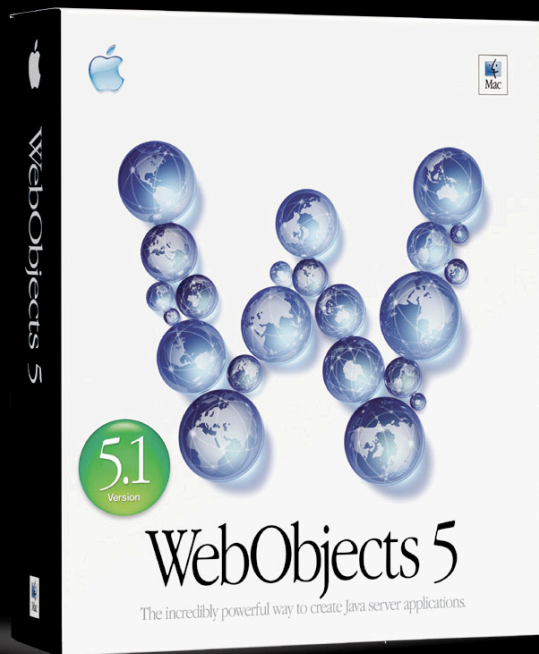


Open Directory Server



WebObjects 5.1

Everything you need to create three-tier applications



- Integrated development environment
- Database mapping
- Page layout
- Graphical user interface design
- Java deployment to J2EE or J2SE





Documentation

**Katherine Wenc
Manager, WebObjects
Technical Publications**

WebObjects Documentation

- State of the documentation for WebObjects
- What's changed, what to expect in future releases
- Where to find documentation



New Site Organization



PATH [Documentation](#) > WebObjects

WebObjects 5.1 Developer Documentation

Site Information

[New and updated documentation](#)

Essentials

[WebObjects Overview](#) (PDF)
(Hardcopy)
[What's New in WebObjects 5.1](#) (PDF)
[Post-Installation Guide](#) (PDF)

Related Resources

[Acknowledgements](#) (PDF)
[Apple-hosted WebObjects discussions](#)
[AppleCare Knowledge Base: WebObjects](#)
[Differences between WO 4.5 and 5.0](#)
[Omni Group WebObjects Mailing Lists](#)

[Yervante.com](#) (a.k.a. (Hardcopy))
[O'Reilly Mac DevCenter](#)
[Technical Notes](#)

Development

[Discovering WebObjects for HTML](#)
(PDF) (Hardcopy)
[Getting Started With WebObjects](#) (For
Windows only) (PDF)
[Developing WebObjects Applications
With Direct to Web](#) (PDF)
[Developing EJB Applications](#) (PDF)

Deployment

[Deploying WebObjects Applications](#)
(PDF) (Hardcopy)
[Monitor and wotaskd](#)
[WebObjects Adaptors](#)

Reference

[WebObjects API Reference](#) (TAR)
[Viewing WebObjects API Reference in
Project Builder](#)
[WebObjects Dynamic Elements
Reference](#) (PDF) (TAR)



Accomplishments

- WebObjects Desktop Applications
- Developing EJB Applications
- Developing Applications using JSP
- Post-Installation Guide
- Reference documentation in Javadoc format for all public API
- Developing SMIL Presentations
- WebObjects Dynamic Elements



Future Goals

- Enhanced Java Client Desktop Apps: **Available now!**
- Web Services documentation
- XML Serialization documentation
- Designing Enterprise Objects
- More comprehensive Installation Guides
- Updated Programming Topics
- API reference searchable in Developer Help Center



How to Access Documentation

- Most up-to-date: PDF and HTML
<http://developer.apple.com/techpubs/webobjects>
- Hardcopy print-on-demand
Vervante.com under **Related Resources**
- Product CD
Documents folder and installed in
/Developer/Documentation/WebObjects
- In the box (localized)
Installation Guides, What's New, WebObjects Overview, Java Client Desktop Applications, Discovering WebObjects for HTML
- Check ADC News for latest updates
<http://developer.apple.com/devnews>

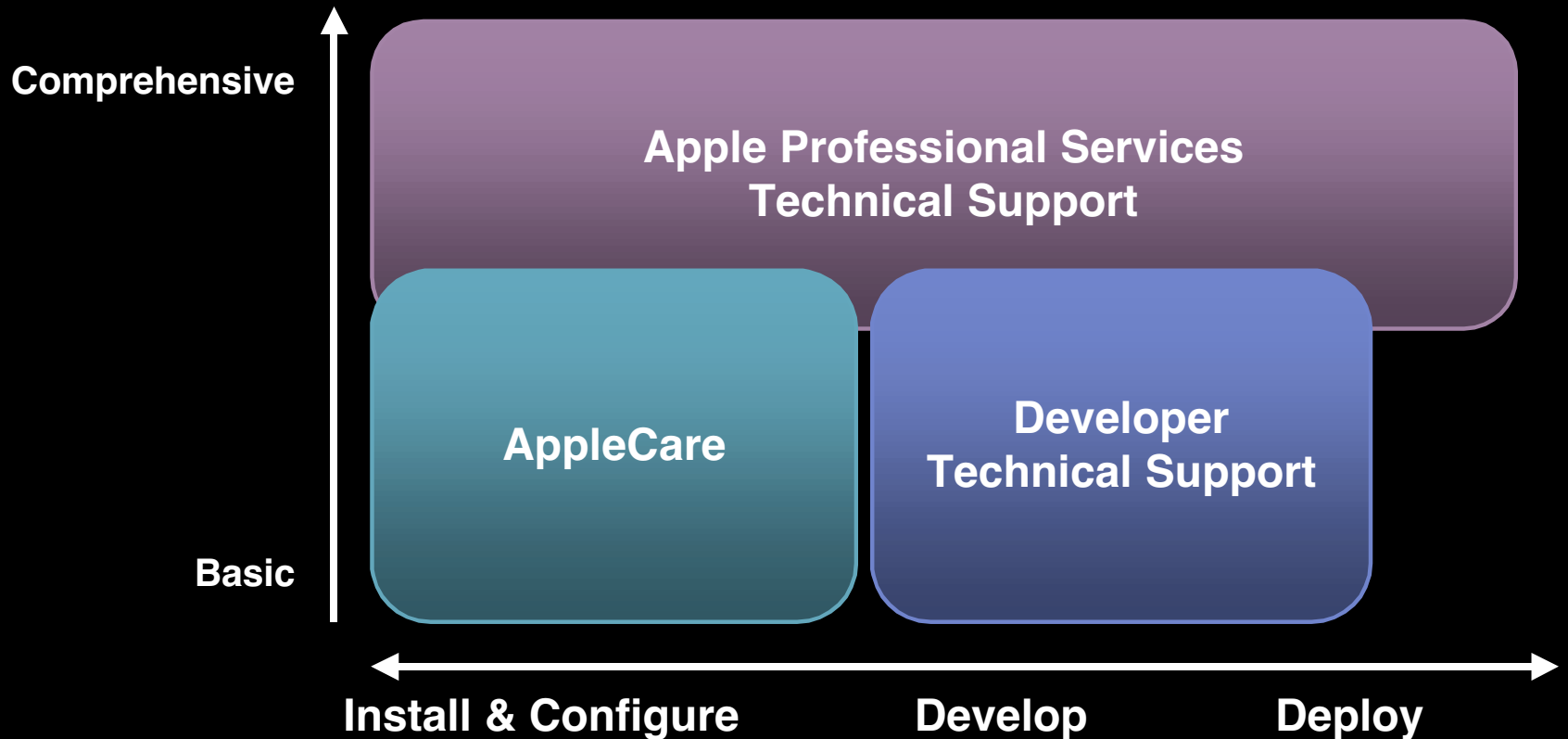




Apple Professional Services

Joe Keenan
Apple Professional Services

Apple Technical Support Providers



Apple Professional Services

- Web: www.apple.com/services
- E-mail: services@apple.com
- Phone: (800) 848-6398





WebObjects Training

Dirk Johnson
Training Curriculum Manager

WebObjects Training

- WebObjects Development I
 - WebObjects basics
- WebObjects Development II
 - For experienced WebObjects developers moving to the next level
- WebObjects Deployment
 - For systems administrators and senior developers



How Do I Sign Up?

- Online at <http://train.apple.com/> or by telephone at 1-800-848-6398
- 3 and 5 day courses
- Hands-on exercises with indexed lab manual and Student CD containing exercise solutions
- On-site training





WebObjects Technical Tracks

Bob Fraser
Product Manager
WebObjects

WebObjects Introductory Track

701 WebObjects Technical Overview

Room A1
Tue., 10:30am

702 Introduction to WebObjects Tools

Room A1
Tue., 2:00pm

**703 Intro to Enterprise Objects
Frameworks**

Room A1
Tue., 3:30pm

705 WebObjects and WebServices

Room A1
Wed., 2:00pm

713 WebObjects Solutions

Room A1
Fri., 9:00am



WebObjects Intermediate Track

704 XML in WebObjects

Room A1
Tues., 5:00pm

706 Direct to Java Client

Room A1
Wed., 3:30pm

707 WebObjects Java Client

Room A1
Tues., 3:30pm

708 Enterprise Java Beans

Room A1
Thurs., 9:00am

709 Deploying WebObjects Applications

Room A1
Fri., 10:30am



WebObjects Intermediate Track

**710 Java Server Pages and Servlet
Integration**

Room A1
Thurs., 2:00pm

908 Delivering with Project Builder

Hall 2
Fri., 2:00pm



WebObjects Advanced Track

**711 Advanced Data Modeling
and Connectivity**

Room A1
Thurs., 3:30pm

**712 Advanced Enterprise Objects
Frameworks**

Room A1
Thurs., 5:00pm

714 Optimizing WebObjects Applications

Room A1
Fri., 10:30am

715 WebObjects Security

Room A1
Fri., 2:00pm



Web Services Track

804 Client Web Services Frameworks

Room J
Tues., 10:30am

405 Java Web Services

Room A1
Thurs., 5:00pm

705 WebObjects and Web Services

Room A1
Wed., 2:00pm



Who Supports WebObjects

Bob Fraser

WebObjects Product Manager

Katherine Wenc

Manager, WebObjects
Technical Publications

Joe Keenan

Apple Professional Services

Dirk Johnson

Training Curriculum Manager



Who Builds WebObjects

Toni Trujillo-Vian
WebObjects Director

Todd Fernandez
Quality Manager

Andreas Wendker
Rapid Development Manager

Jeff Glasson
Framework Manager

Francois Jouaux
Deployment Manager

Stan Jirman
Tools Manager



WebObjects Lab

- Located downstairs in Room L
- Lab hours
 - Monday 12:00pm–6:00pm
 - Tuesday 9:00am–2:00pm*
 - Wednesday 9:00am–6:00pm
 - Thursday 9:00am–6:00pm
 - Friday 9:00am–6:00pm

*Conversion Workshop Tuesday 2-6pm. Sign up in Lab



Who to Contact

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webobjects@apple.com

Bob Fraser

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webobjects@apple.com

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(800) 848-6398
services@apple.com



For More Information

- WebObjects Developer Documentation
<http://developer.apple.com/techpubs/webobjects>
- Apple Professional Services Technical Support
(www.apple.com/services/technicalsupport)
- Other places
 - www.apple.com/webobjects
 - developer.apple.com/webobjects
 - www.apple.com/services
 - www.info.apple.com/webobjects

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